REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 22, 2002. Claims 1-5, 7-17, 24-25, 27-50, 52-62, 64-88, 90-103, 105, 111-114, 117-129, and 132 were pending in this Application prior to this Amendment and Response. Claims 69, 83 and 84 have been cancelled herein, without prejudice or disclaimer, and Claims 1, 2, 3, 7, 13, 14, 27, 52, 54, 64, 65, 66, 102, 118, 119, 120, 121, 122, 123, 125 and 129 have been amended. Exhibit B provides an edited version of the amended Claims, and highlights all such amendments. Thus, Claims 1-5, 7-17, 24-25, 27-50, 52-62, 64-68, 70-82, 85-88, 90-103, 105, 111-114, 117-129, and 132 are now pending in this Application.

Applicants have made various minor amendments to the Specification to correct typographical and grammatical errors. Applicants note that these amendments did not introduce any new matter into the Specification and such minor amendments were not made for reasons of patentability. Applicants further note that all such amendments were made for stylistic reasons and all amendments were made with clear support and, in some cases, to make explicit what was already implicit in the Specification. As such, no estoppel or other adverse effect should attach to these amendments, and Applicants respectfully request that these amendments be entered. Please note that the attached Exhibit A provides an edited version of the changes to the Specification, and highlights all such amendments.

Applicants previously submitted formal drawings of FIGURES 1-6 in their prior Amendment and Response to Office Action Mailed July 5, 2001. Applicants, once again, request approval of these drawings by the Examiner and the Official Draftsman. If additional copies of these formal drawings are needed, please contact the undersigned.

CLAIM AMENDMENTS AND REJECTIONS BASED ON 35 U.S.C. § 103

Applicants appreciate the Examiner taking the time to conduct a teleconference with Applicants' legal representative on August 21, 2002, where agreement was reached on claim language that would be acceptable to the Examiner. In particular, Applicants, through amendments to independent Claims 1 and 129, have clearly distinguished their invention from any cited references, indicated how a plasma is formed, what surface is being plated, and the how such a plated surface may be used. For example, independent Claims 1 and 129 both generally recite the following limitations:

a substrate with a threaded surface

to create a plated threaded surface

wherein the plated threaded surface reduces galling between the plated threaded surface and a surface of a mated component

None of the cited references teach, describe or suggest the limitations recited above as claimed in independent Claims 1 and 129. Independent Claim 1 further recites the following limitation:

the depositant includes at least a first metal

Just as with the limitations mentioned above, none of the cited references teach, describe or suggest such a limitation as recited in independent Claim 1.

Because independent Claims 1 and 129 are the only remaining independent claims, all remaining dependent claims depend, either directly or indirectly, from one of these two independent claims. As such, all of the presently pending claims are patentably distinct from all cited references, including, without limitation, US Patent No. 5,078,847 to Grosman et al., US Patent Nos. 3,857,682; 4,039,416; 4,054,426; RE 30,401; 4,342,631; 4,420,386; 4,468,309; 4,673,586; 4,667,620; 4,826,365; 5,252,365 to White, US Patent No. 3,329,601 to Mattox, US Patent No. 4,938,859 to Ide et al., US Patent No. 4,282,597 to Yenawine et al., US Patent No. 4,725,345 to Sakamoto et al., US Patent No. 4,990,233 to Hahn, and US Patent No. 4,137,370 to Fujishiro et al. The various differences highlighted in Applicants prior response provides additional claim limitations that are not taught or suggested, either alone or in combination, by any of these references.

Applicants respectfully submit that all claim amendments made herein were not intended to narrow the scope of the claims

in response to a patentability rejection, but instead were made to make explicit what was already implicit and to further clarify what Applicants believe were already explicit in the claims before amendment. As such, none of the amendments made herein should be construed to estop or limit Applicants capability, in any manner, to the full scope of equivalents for all limitations of all claims in this Application under the Doctrine of Equivalents.

OBJECTIONS AND REJECTIONS BASED ON 35 U.S.C. § 112

The Examiner objected to and/or rejected Claims 1-17, 24, 25, 27-50, 52-62, 64-88, 90-103, 105, 111-114, 117-129 and 132 based on 35 U.S.C. § 112, ¶ 2 "as being indefinite." As discussed herein and as provided by the various amendments to the claims, Applicants have overcome these objections and rejections and earnestly seek full allowance of these claims.

Applicants, once again, respectfully traverse the Examiners rejection of Claims 34-39, 42-47, 53 and 55 based on the allegations of the Examiner that "the words 'base', 'transition' or 'working' is used before 'layer,' however no context in the claims provides these modifiers with any clear or necessary meaning." Applicants note that these terms are clearly defined in the Application in numerous locations throughout and are used in a manner that is clear and unambiguous by providing an added limitation that such layers serve and function as defined and in the relationship to one another as defined in the Specification and Drawings of the Application. Applicants respectfully aver

that these claims comply with 35 U.S.C. § 112, ¶ 2. For example, please see FIGURE 4 and all related discussion in the Specification on pages 19-22, where all of these terms are illustrated, discussed, and their relationship to each other is clearly illustrated.

Similarly, Applicants respectfully traverse the Examiners objection to Claims 36-39, 44-47, 53 and 55 based on the assertion by the Examiner that these claims are in "improper dependent form for failing to further limit the subject matter of a previous claim." The "layer" limitations are clearly defined, illustrated, and provide an added and distinguishing limitation and structure to each of these claims. As such. Applicants respectfully assert that these claims are in proper form.

The Examiner objected to Claims 41-47 and alleged that the term "evaporation source" can refer to more than one evaporation source. Applicants assert that these claim limitations are abundantly clear and the difference between "the evaporation source" and "the second evaporation source" is a entirely clear and unambiguous according to standard patent law claim construction and antecedent basis rules.

The Examiner objected to the term "the total mass" in Claim 49 and alleged somehow that this lacks proper antecedent basis. Mass is an inherent property of all structures and, as such, does not need any antecedent language. As such, Claim 49 is not ambiguous.

The Examiner incorrectly asserts that Claims 56 and 57, as previously amended, constitute new matter. This is incorrect. Page 30 of the Application includes the following:

> The frequency of the radio frequency signal will **generally** be provided at an industrial specified frequency value in either **the kilohertz range or the megahertz range.** Preferably, the frequency signal will be provided at a frequency of 13.56 kilohertz. Although the term radio frequency has been used throughout to describe the generation and application of the radio frequency signal to the substrate, it should be understood that **the term radio frequency should not be limited** to its commonly understood definition of signals having frequencies roughly between 10 kilohertz and 100,000 megahertz. **The term radio frequency shall also include any signal with a frequency component that is operable or capable of assisting with the creation or excitation of a plasma in a vacuum chamber.**

(bold emphasis added). Plainly, this rejection is incorrect, is amply supported by the Specification, and no new matter has been introduced by the amendments to these two claims.

Applicants assert that the term "white metal clean" is clearly defined as well known to one of ordinary skill in the art and hence Claim 61 is not indefinite. Similarly, Applicants strongly contend that the "Steel Structures Painting Structures (SSPC)" is also clearly defined as well known to one of ordinary skill in the art and hence Claims 62-66 are not indefinite. For example, a quick Internet search finds **both** the terms "white metal clean" and "SSPC" in the same document found at http://www.natare.com/consult/lit/coatings/nalar2000-filter-linings.pdf . Applicants, however, make no representations and

have no knowledge regarding this document or its contents, it is cited only as evidence that these terms are readily available and generally known.

The Examiner objected to the use of a slash "/" in the term "silver/palladium" in Claim 102. It is clear from the Specification that the slash is understood to mean "and" and not "and/or" or "or". Thus, this rejection should be withdrawn.

The Examiner objected to the term "amplitude" in Claims 111 and 113 because it allegedly could be confused with "amplitude" in Claim 1. Applicants contend that the term "amplitude" as used before the term voltage or current is completely unambiguous and one of ordinary skill in the art would clearly understand such usage. Further, Applicants contend that the English language could not be contorted in such a case to cause confusion of the usage as provided in Claims 111 and 113.

The Examiner further objected to Claims 117, 120, 122 and 128 based on various claims of lack of antecedent basis, lack of a positive limitation, which is not improper, and the Examiner's confusion as to terms in independent Claim 1. Applicants, similar to what was discussed above, strongly asserts that all of these claims are clear, understandable, not ambiguous, when read in view of the Specification and one of ordinary skill in the light. To force Applicants to change such claim language unfairly deprives Applicants of their desired language to describe their invention in a manner that Applicants believe would be easily understood by one skilled in the art. As such, Applicants respectfully request withdrawal of these objections.

For all the reasons mentioned above, Applicants respectfully request withdrawal of these objections and rejections. Applicants strongly believes it is entitled to full allowance of all pending claims.

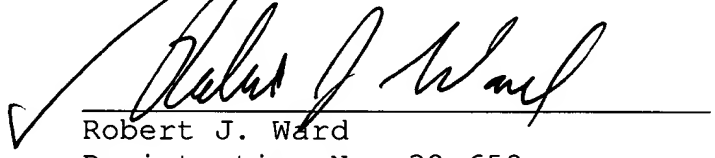
CONCLUSION

For all the reasons mentioned herein, Applicants respectfully request reconsideration. Applicants submit that the Application is in condition for full allowance of all currently pending claims, and Applicants earnestly seek such full allowance. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this Application, please contact the undersigned by telephone at 214.979.3027. Applicants, through their attorney, stand ready to conduct a telephone interview with the Examiner to review this Application if the Examiner believes that such an interview would assist in the advancement of this Application.

To the extent that any further fees are required during the pendency of this Application, including petition fees, the Commissioner is hereby authorized to charge payment of any additional fees, including, without limitation, any fees under 37 C.F.R. § 1.16 or 37 C.F.R. § 1.17, to Deposit Account No. 23-3189 of Hunton & Williams (Dallas) and reference Attorney Docket No. 88742.472005. In the event that any additional time is needed for this filing, or any additional time in excess of that requested in a petition for an extension of time, please consider this a petition for an extension of time for any needed

extension of time pursuant to 37 C.F.R. § 1.136 or any other section or provision of Title 37 of the Code of Federal Regulations. Applicants respectfully request that the Commissioner grant any such petition and authorize the Commissioner to charge the Deposit Account referenced above. Please credit any overpayments to this same Deposit Account.

Respectfully submitted,



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ATTORNEY FOR APPLICANTS

November 22, 2002

EXHIBIT A

Please substitute the paragraph on page 2, lines 1-14, containing the text:

-- BACKGROUND OF THE INVENTION

Various deposition technologies exist for plating and coating materials. These various technologies include, for example, vacuum deposition or physical vapor deposition ("PVD"), chemical vapor deposition ("CVD"), sputtering, and ion plating. All of these deposition technologies suffer from disadvantages such as poor deposition layer adhesion, high cost, generation of environmentally wasteful products that are expensive and cumbersome to dispose, damage to the substrate, elevated substrate temperatures, nonuniform deposition layers, inefficient use of expensive depositants, and inconsistent application of deposition layers are among some of the disadvantages suffered by one or more of the prior deposition technologies. --

and insert in its place the following pargraph:

-- BACKGROUND OF THE INVENTION

Various deposition technologies exist for plating and coating materials. These various technologies include, for example, vacuum deposition or physical vapor deposition ("PVD"), chemical vapor deposition ("CVD"), sputtering, and ion plating. **[All of t]** **T**hese deposition technologies suffer from **various** disadvantages**. [such as]** **These disadvantages may include, for example,** poor deposition layer adhesion,

high cost, generation of environmentally wasteful products that are expensive and cumbersome to dispose, damage to the substrate, elevated substrate temperatures, nonuniform deposition layers, inefficient use of expensive depositants, and inconsistent application of deposition layers. **[are among some of the disadvantages suffered by one or more of the prior deposition technologies.] --**

Please substitute the paragraph on lines 31-32 of page 3 thru lines 1-16 of page 4, containing the text:

-- According to another aspect of the present invention, an system for plasma plating is provided that generates a deposition layer on a substrate. The system for plasma plating includes a vacuum chamber at a pressure that extends from 0.1 milliTorr to 4 milliTorr, a filament with an associated depositant located on or in the filament, a platform positioned within the vacuum chamber, a substrate positioned at or on the platform, a dc power supply generating a dc signal at a voltage in a range that extends from 1 volt to 5000 volts, a radio frequency transmitter generating a radio frequency signal at a power level defined by a range that extends from 1 watt to 50 watts, an electrically conductive path that electrically couples the dc signal and the radio

frequency signal to the substrate, and a filament power control electrically coupled to the filament and generating a current through the filament at an amplitude to generate heat in the filament to melt the depositant. --

and insert in its place the following pargraph:

-- According to another aspect of the present invention, **a** **[an]** system for plasma plating is provided that generates a deposition layer on a substrate. The system for plasma plating includes a vacuum chamber at a pressure that extends from 0.1 milliTorr to 4 milliTorr, a filament with an associated depositant located on or in the filament, a platform positioned within the vacuum chamber, a substrate positioned at or on the platform, a dc power supply generating a dc signal at a voltage in a range that extends from 1 volt to 5000 volts, a radio frequency transmitter generating a radio frequency signal at a power level defined by a range that extends from 1 watt to 50 watts, an electrically conductive path that electrically couples the dc signal and the radio frequency signal to the substrate, and a filament power control electrically coupled to the filament and generating a current through the filament at an amplitude to generate heat in the filament to melt the depositant. --

Please substitute the paragraph on page 4, lines 27-33, containing the text:

-- Another technical advantage of the present invention includes the capability to efficiently use depositants to minimize the consumption of depositants, which often are expensive precious metals such as gold and even platinum. These efficiencies are achieve through the proper placement of filaments and the use of proper operational parameters. This significantly reduces overall costs. --

and insert in its place the following pargraph:

-- Another technical advantage of the present invention includes the capability to efficiently use depositants to minimize the consumption of depositants, which often are expensive precious metals such as gold and even platinum. These efficiencies are achieved through the proper placement of filaments and the use of proper operational parameters. This significantly reduces overall costs. --

Please substitute the paragraph on page 5, lines 25-31, containing the text:

-- Still yet another technical advantage includes the capability plate a substrate with a deposition layer with a thickness that is small enough so as not to change the functional shape of the substrate, such as a bolt, a nut, a fastner, and other components with strict tolerances. The present invention will also work in the presence of an oxidation layer. --

and insert in its place the following pargraph:

-- Still yet another technical advantage includes the capability **to** plate a substrate with a deposition layer with a thickness that is small enough so as not to change the functional shape of the substrate, such as a bolt, a nut, a **fastener [fastner]**, and other components with strict tolerances. The present invention will also work in the presence of an oxidation layer. --

Please substitute the paragraph on page 8, lines 10-26, containing the text:

-- **FIGURE 1** is a schematic diagram that illustrates a system 10 for plasma plating that can be used to plate any of a variety of materials, according to an embodiment of the present invention. The system 10

includes various equipment used to support the plasma plating of a substrate 12 within a vacuum chamber 14. Once appropriate operating parameters and conditions are achieved, a depositant provided in a filament 16 and a filament 18 may be evaporated or vaporized to form a plasma. The plasma will contain, generally, positively charged ions from the depositant and will be attracted to the substrate 12 where they will form a deposition layer. The plasma may be thought of as a cloud of ions that surround or are located near the substrate 12. The plasma will generally develop a dark region, near the closest surface of the substrate 12 from the filament 12 and the filament 18, that provides acceleration of the positive ions into the substrate 12. --

and insert in its place the following paragraph:

-- **FIGURE 1** is a schematic diagram that illustrates a system 10 for plasma plating that can be used to plate any of a variety of materials, according to an embodiment of the present invention. The system 10 includes various equipment used to support the plasma plating of a substrate 12 within a vacuum chamber 14. Once appropriate operating parameters and conditions are achieved, a depositant provided in a filament 16 and a filament 18 may be evaporated or vaporized to form a plasma. The plasma will contain, generally,

positively charged ions from the depositant and will be attracted to the substrate 12 where they will form a deposition layer. The plasma may be thought of as a cloud of ions that surround or are located near the substrate 12. The plasma will generally develop a dark region, near the closest surface of the substrate 12 from the filament **16** **[12]** and the filament 18, that provides acceleration of the positive ions **[into]** **to** the substrate 12. --

Please substitute the paragraph on lines 27-32 of page 8, thru lines 1-7, containing the text:

-- The filament 12 and the filament 14 reside within the vacuum chamber 14 along with a platform 20, which supports the substrate 12. A drive assembly 22 is shown coupled between a drive motor 24 and a main shaft of the platform 20 within the vacuum chamber 14. In the embodiment shown in FIGURE 1, the platform 20 is provided as a turntable that rotates within the vacuum chamber 14. The drive assembly 22 mechanically links the rotational motion of the drive motor 24 with the main shaft of the platform 20 to impart rotation to the platform 20. The rotation of the main shaft of the platform 20 is enhanced through various support bearings such as a base plate bearing 28 and a platform bearing 30. --

and insert in its place the following paragraph:

-- The filament **16** **[12]** and the filament **18** **[14]** reside within the vacuum chamber 14 along with a platform 20, which supports the substrate 12. A drive assembly 22 is shown coupled between a drive motor 24 and a main shaft of the platform 20 within the vacuum chamber 14. In the embodiment shown in FIGURE 1, the platform 20 is provided as a turntable that rotates within the vacuum chamber 14. The drive assembly 22 mechanically links the rotational motion of the drive motor 24 with the main shaft of the platform 20 to impart rotation to the platform 20. The rotation of the main shaft of the platform 20 is enhanced through various support bearings such as a base plate bearing 28 and a platform bearing 30. --

Please substitute the paragraph on page 10, lines 11-29 containing the text:

-- The filament power control module 34 provides an electric current to the filament 16 and the filament 18. In one embodiment, the filament power control module 34 can provide current to the filament 16 for a particular duration, and then provide current to the filament 18 during a second duration. Depending upon

how the filaments are configured, the filament power control module 34 may provide current to both the filament 16 and the filament 18 at the same time or during separate intervals. This flexibility allows more than one particular depositant material to be plasma plated onto the substrate 12 at different times. The filament power control module 34 preferably provides alternating current to the filaments, but may provide a current using any known method of generating current. In a preferred embodiment, the filament power control module 34 provides current at an amplitude or magnitude that is sufficient to generate enough heat in the filament 16 to evaporate or vaporize the depositant. --

and insert in its place the following paragraph:

-- The filament power control module 34 provides an electric current to the filament 16 and the filament 18. In one embodiment, the filament power control module 34 can provide current to the filament 16 for a particular duration, and then provide current to the filament 18 during a second duration. Depending upon how the filaments are configured, the filament power control module 34 may provide current to both the filament 16 and the filament 18 at the same time or during separate intervals. This flexibility allows more than one particular depositant material to be

plasma plated onto the substrate 12 at different times. The filament power control module 34 preferably provides alternating current to the filaments, but may provide a current using any known method of generating current. In a preferred embodiment, the filament power control module 34 provides current at an amplitude or magnitude that is sufficient to generate enough heat in the filament 16 to evaporate or vaporize the depositant **provided therein**. --

Please substitute the paragraph on page 13, lines 4-19 containing the text:

-- The remaining equipment and components of the system 10 of FIGURE 1 are used to create, maintain, and control the desired vacuum condition within the vacuum chamber 14. This is achieved through the use of a vacuum system. The vacuum system includes a roughing pump 46 and a roughing valve 48 that is used to initially pull down the pressure in the vacuum chamber 14. The vacuum system also includes a foreline pump 40, a foreline valve 44, a diffusion pump 42, and a main valve 50. The foreline valve 44 is opened so that the foreline pump 40 can began to function. After the diffusion pump 42 is warmed or heated to an appropriate level, the main valve 50 is

opened, after the roughing pump 40 has been shut in by closing the roughing valve 44. This allows the diffusion pump 42 to further reduce the pressure in the vacuum chamber 14 below a desired level. --

and insert in its place the following paragraph:

-- The remaining equipment and components of the system 10 of FIGURE 1 are used to create, maintain, and control the desired vacuum condition within the vacuum chamber 14. This is achieved through the use of a vacuum system. The vacuum system includes a roughing pump 46 and a roughing valve 48 that is used to initially pull down the pressure in the vacuum chamber 14. The vacuum system also includes a foreline pump 40, a foreline valve 44, a diffusion pump 42, and a main valve 50. The foreline valve 44 is opened so that the foreline pump 40 can began to function. After the diffusion pump 42 is warmed or heated to an appropriate level, the main valve 50 is opened, after the roughing pump **46** **[40]** has been shut in by closing the roughing valve **48** **[44]**. This allows the diffusion pump 42 to further reduce the pressure in the vacuum chamber 14 below a desired level. --

Please substitute the paragraph on lines 30-33 of page 14, thru lines 1-16 of page 15 containing the text:

-- As described above, the vacuum system includes the roughing pump 46 and the diffusion pump 42, which is used with the foreline pump 40. The roughing pump 46 couples to the vacuum chamber 14 through the roughing valve 48. When the roughing valve 48 is open, the roughing pump 46 may be used to initially reduce the pressure within the vacuum chamber 14. Once a desired lower pressure is achieved within the vacuum chamber 14, the roughing valve 48 is closed. The roughing pump 46 couples to the vacuum chamber 14 through a hole or opening through the base plate 32. The roughing pump 46 will preferably be provided as a mechanical pump. In a preferred embodiment of the vacuum system of the system 10 as shown in FIGURE 1. The vacuum system in this embodiment includes a foreline pump coupled to a diffusion pump 42 through a foreline valve 44. The foreline pump 40 may be implemented as a mechanical pump that is used in combination with the diffusion pump 42 to reduce the pressure within the vacuum chamber 14 to a level even lower than that which was produced through the use of the roughing pump 46. --

and insert in its place the following paragraph:

-- As described above, the vacuum system includes the roughing pump 46 and the diffusion pump 42, which

is used with the foreline pump 40. The roughing pump 46 couples to the vacuum chamber 14 through the roughing valve 48. When the roughing valve 48 is open, the roughing pump 46 may be used to initially reduce the pressure within the vacuum chamber 14. Once a desired lower pressure is achieved within the vacuum chamber 14, the roughing valve 48 is closed. The roughing pump 46 couples to the vacuum chamber 14 through a hole or opening through the base plate 32. The roughing pump 46 will preferably be provided as a mechanical pump. In a preferred embodiment of the vacuum system of the system 10 as shown in FIGURE 1**,** **[.] [The]** **the** vacuum system in this embodiment **also** includes a foreline pump **40** coupled to a diffusion pump 42 through a foreline valve 44. The foreline pump 40 may be implemented as a mechanical pump that is used in combination with the diffusion pump 42 to reduce the pressure within the vacuum chamber 14 to a level even lower than that which was produced through the use of the roughing pump 46. --

Please substitute the paragraph on lines 17-33 of page 15 thru lines 1-10 of page 16 containing the text:

-- After the roughing pump has reduced the pressure within the vacuum chamber 14, the diffusion pump 42, which uses heaters and may require the use of cooling

water or some other substance to cool the diffusion pump 42, couples with the vacuum chamber 14 through a main valve 50 and through various holes or openings through the base plate 32 as indicated in FIGURE 1 by the dashed lines above the main valve 50 and below the platform 20. Once the diffusion pump 42 has been heated up and made ready for operation, the main valve 50 may be opened so that the pressure within the vacuum chamber 14 may be further reduced through the action of the diffusion pump 42 in combination with the foreline pump 44. For example, the pressure within the vacuum chamber 14 may be brought below 4 milliTorr. During a backsputtering process, the pressure in the vacuum chamber 14 may be dropped to a level at or below 100 milliTorr on down to 20 milliTorr. Preferably, the pressure within the vacuum chamber 14 during a backsputtering process will be at a level at or below 50 milliTorr on down to 30 milliTorr. During normal operation of the system 10 during a plasma plating process, the pressure within the vacuum chamber 14 may be reduced by the vacuum system to a level at or below 4 milliTorr on down to a value of 0.1 milliTorr. Preferably, the vacuum system will be used during a plasma plating process to reduce the pressure within the vacuum chamber 14 to a level at or below 1.5 milliTorr on down to 0.5 milliTorr.--

and insert in its place the following paragraph:

-- After the roughing pump **46** has reduced the pressure within the vacuum chamber 14, the diffusion pump 42, which uses heaters and may require the use of cooling water or some other substance to cool the diffusion pump 42, couples with the vacuum chamber 14 through a main valve 50 and through various holes or openings through the base plate 32 as indicated in FIGURE 1 by the dashed lines above the main valve 50 and below the platform 20. Once the diffusion pump 42 has been heated up and made ready for operation, the main valve 50 may be opened so that the pressure within the vacuum chamber 14 may be further reduced through the action of the diffusion pump 42 in combination with the foreline pump 44. For example, the pressure within the vacuum chamber 14 may be brought below 4 milliTorr. During a backsputtering process, the pressure in the vacuum chamber 14 may be dropped to a level at or below 100 milliTorr on down to 20 milliTorr. Preferably, the pressure within the vacuum chamber 14 during a backsputtering process will be at a level at or below 50 milliTorr on down to 30 milliTorr. During normal operation of the system 10 during a plasma plating process, the pressure within the vacuum chamber 14 may be reduced by the vacuum system to a level at or below 4 milliTorr on down to a value of 0.1 milliTorr. Preferably, the vacuum

system will be used during a plasma plating process to reduce the pressure within the vacuum chamber 14 to a level at or below 1.5 milliTorr on down to 0.5 milliTorr.--

Please substitute the paragraph on lines 26-32 of page 18, thru lines 1-15 of page 19 containing the text:

-- **FIGURE 3** is a side view that illustrates the formation and dispersion of a plasma around a filament 100 to plasma plate a substrate 12 according to an embodiment of the present invention. The filament 100 is implemented as a wire basket, such as tungsten wire basket, and is shown with a depositant 102 located, and mechanically supported, within the filament 100. As the filament power control module 34 provides sufficient current to the filament 100, the depositant 102 melts or vaporizes and a plasma 104 is formed. Of course, all of the operating parameters of the present invention must be present in order to achieve the plasma state so that plasma plating may takes place.--

and insert in its place the following paragraph:

-- **FIGURE 3** is a side view that illustrates the formation and dispersion of a plasma around a filament 100 to plasma plate a substrate 12 according to an

embodiment of the present invention. The filament 100 is implemented as a wire basket, such as tungsten wire basket, and is shown with a depositant 102 located **within**, and mechanically supported **by**, **[within]** the filament 100. As the filament power control module 34 provides sufficient current to the filament 100, the depositant 102 melts or vaporizes and a plasma 104 is formed. Of course, all of the operating parameters of the present invention must be present in order to achieve the plasma state so that plasma plating may take**[s]** place.--

EXHIBIT B

1. **(Three Times Amended)** A method for plasma plating comprising:

positioning a substrate **with a threaded surface** within a vacuum chamber;

positioning a depositant in an evaporation source within the vacuum chamber**, the depositant includes at least a first metal**;

reducing an initial pressure in the vacuum chamber to at or below 4 milliTorr;

flowing a gas through the vacuum chamber at a rate to raise the pressure in the vacuum chamber to at or between 0.1 milliTorr and 4 milliTorr;

applying a negative dc signal to the substrate at a voltage amplitude at or between 1 volt and 5000 volts;

applying a radio frequency signal to the substrate at a power level at or between 1 watt and 50 watts; and

heating the depositant to a temperature at or above the melting point of the depositant, whereby a plasma is generated in the vacuum chamber, **[which] the plasma** includes a mixture of positively charged depositant ions and **n gatively charged** electrons, and the depositant ions are plated on **[a] the threaded** surface

of the substrate **to create a plated threaded surface, and wherein the plated threaded surface reduces galling between the plated threaded surface and a surface of a mated component**.

2. **(Twice Amended)** The method of Claim 1, wherein **[reducing]** the initial pressure **is reduced** in the vacuum chamber to **[at or below 4 milliTorr includes reducing the pressure in the vacuum chamber to]** at or below 1.5 milliTorr, and wherein **[flowing a]** gas **is flowed** through the vacuum chamber at a rate to raise the pressure in the vacuum chamber to **[at or between 0.1 milliTorr and 4 milliTorr includes flowing the gas through the vacuum chamber at a rate to raise the pressure in the vacuum chamber to]** at or between 0.5 milliTorr and 1.5 milliTorr.

3. **(Twice Amended)** The method of Claim 1, wherein **[applying]** the negative dc signal **is applied** to the substrate at a voltage amplitude **[at or between 1 volt and 5000 volts includes applying a negative dc signal to the substrate at a voltage amplitude]** at or between negative 500 volts and negative 750 volts.

7. **(Twice Amended)** The method of Claim 1, wherein **[reducing]** the initial pressure **is reduced** in the vacuum chamber to at or below **[4 milliTorr includes reducing the initial pressure in the vacuum chamber to at or below]** 1.5 milliTorr, and **[flowing]** the gas **is flowed** through the vacuum chamber at a rate to raise the pressure in the vacuum chamber to at or between **[0.1 milliTorr and 4 milliTorr includes flowing the gas through the vacuum chamber at a rate to raise the pressure to at or between]** 0.5 milliTorr and 1.5 milliTorr, wherein **[applying]** a negative dc signal **is applied** to the substrate at a voltage amplitude at or between **[1 volt and 5000 volts includes applying a negative dc signal to the substrate at a voltage amplitude at or between]** negative 500 volts and negative 750 volts, and wherein the power level is provided at or between 5 and 15 watts.

13. **(Amended)** The method of Claim 12, wherein **[applying the dc signal to the substrate and applying the radio frequency signal to the substrate include applying]** the dc signal and the radio frequency signal **are applied** to the electrically conductive material of the turntable using a commutator.

14. **(Amended)** The method of Claim 12, wherein **[applying the dc signal to the substrate and applying the radio frequency signal to the substrate include applying]** the dc signal and the radio frequency signal **are applied** to the electrically conductive material of the turntable using an electrically conductive brush.

27. **(Amended)** The method of Claim 1, further comprising:

mixing the dc signal and the radio frequency signal to generate a mixed signal, and wherein **[applying]** the dc signal **[to the substrate and applying] and** the radio frequency signal **[to the substrate]** includes applying the mixed signal to the substrate.

52. **(Three Times Amended)** The method of Claim 1, further comprising:

positioning a second depositant in a second evaporation source within the vacuum chamber before reducing the **initial** pressure in the vacuum chamber to at or below 4 milliTorr; and

heating the second depositant to at or above the melting point of the second depositant, whereby a second plasma is generated in the vacuum chamber, **[which] the second plasma** includes a mixture of positively charged second depositant ions and **negativel charged** electrons, and the second depositant ions are plated on the **threaded** surface of the substrate **[that was plated with the depositant ions]**.

54. **(Three Times Amended)** The method of Claim 52, further comprising:

positioning a third depositant in a third evaporation source within the vacuum chamber before reducing the **initial** pressure in the vacuum chamber to at or below 4 milliTorr; and

heating the third depositant to a temperature at or above the melting point of the third depositant, whereby a third plasma is generated in the vacuum chamber, **[which] the third plasma** includes a mixture of positively charged third depositant ions and **negatively charged** electrons, and the third depositant ions are plated on the **substrate [surface of the substrate that was plated with the second depositant ions]**.

64. **(Amended)** The method of Claim **62 [63]**, wherein **cleaning the substrate includes cleaning the substrate to meet a defined standard [the standard is]** defined by Steel Structures Painting Council (SSPC).

65. **(Amended)** The method of Claim **64** **[63]**, wherein the standard is SSPC-5.

66. **(Amended)** The method of Claim **64** **[63]**, wherein the standard is SSPC-10.

69. **(Cancel)** The method of Claim 1, wherein the depositant is a metal.

83. **(Cancel)** The method of Claim 1, wherein the depositant is a nonmetal

84. **(Cancel)** The method of Claim 1, wherein the depositant is a ceramic.

102. **(Twice Amended)** The method of Claim 1, wherein the gas is argon and the **depositant** **[despositant]** is a metal alloy of silver/palladium, and the plasma includes argon ions and silver/palladium ions.

118. **(Amended)** The method of Claim 1, wherein the plasma forms a layer on the substrate **[with]** **to create the plated threaded surface at** a thickness at or between 500 and 20,000 Angstroms.

119. **(Amended)** The method of Claim 1, wherein the plasma forms a layer on the substrate **[with]** **to create the plated threaded surface at** a thickness at or between 3,000 and 10,000 Angstroms.

120. **(Amended)** The method of Claim 1, wherein the plasma forms a layer on the substrate **to create the plated threaded surface** that can be controlled to a thickness of 500 Angstroms.

121. **(Amended)** The method of Claim 1, further comprising:

backsputtering the substrate before heating the depositant to a temperature at or above the melting point of the depositant **[to generate a plasma in the vacuum chamber]**.

122. **(Twice Amended)** The method of Claim 1, further comprising:

performing backsputtering before heating the depositant that includes:

reducing the pressure in the vacuum chamber to at or below 100 milliTorr;

flowing a gas through the vacuum chamber at a rate to raise the pressure in the vacuum chamber **to** at or between 20 milliTorr and 100 milliTorr;

applying a dc signal to the substrate at a voltage amplitude at or between 1 volt and 4000 volts; and

applying a radio frequency signal to the substrate at a power level at or between 1 watt and 50 watts.

123. **(Twice Amended)** The method of Claim 122, wherein reducing the pressure in the vacuum chamber **[to at or below 100 milliTorr]** includes reducing the pressure in the vacuum chamber to at or below 50 milliTorr, and wherein flowing the gas through the vacuum chamber at a rate to raise the pressure in the vacuum chamber **to** at or between 20 milliTorr and 100 milliTorr includes flowing the gas through the vacuum chamber at a rate to raise the pressure **to** at or between 20 milliTorr and 50 milliTorr.

125. **(Twice Amended)** The method of Claim 122, wherein **applying the radio frequency signal to the substrate at a power level at or between 1 watt and 50 watts includes applying the radio frequency signal at a [the]** power level **[is provided]** at or between 5 and 15 watts.

129. **(Three Times Amended)** A method for plasma plating comprising:

positioning a substrate **with a threaded surface** within a vacuum chamber;

positioning a depositant in the vacuum chamber;

reducing an initial pressure in the vacuum chamber to at or between 0.5 milliTorr and 1.5 milliTorr;

applying a negative dc signal to the substrate at a voltage amplitude at or between 500 volts and 750 volts;

applying a radio frequency signal to the substrate at a power level at or between 1 watt and 50 watts; and

heating the depositant to a temperature at or above the melting point of the depositant, whereby a plasma is generated in the vacuum chamber, **[which] the plasma** includes a mixture of positively charged depositant ions and **negatively charged** electrons, and the depositant ions are plated on **[a] the threaded** surface of the substrate **to create a plated threaded surface, and wherein the plated threaded surface reduces galling between the plated threaded surface and a surface of a mated component**.

com·mu·nism \'käm-yə-ˌniz-əm\ *n* [F *communisme*, fr. *commun* common] (1840) **1 a** : a theory advocating elimination of private property **b** : a system in which goods are owned in common and are available to all as needed **2** *cap* **a** : a doctrine based on revolutionary Marxian socialism and Marxism-Leninism that is the official ideology of the U.S.S.R. **b** : a totalitarian system of government in which a single authoritarian party controls state-owned means of production with the professed aim of establishing a stateless society **c** : a final stage of society in Marxist theory in which the state has withered away and economic goods are distributed equitably

com·mu·nist \'käm-yə-nəst\ *n* (1840) **1** : an adherent or advocate of communism **2** *cap* : COMMUNARD **3 a** *cap* : a member of a Communist party or movement **b** *often cap* : an adherent or advocate of a Communist government, party, or movement **4** *often cap* : one held to engage in left-wing, subversive, or revolutionary activities — **communist** *adj, often cap* — **com·mu·nis·tic** \ˌkäm-yə-'nis-tik\ *adj, often cap* — **com·mu·nis·ti·cal·ly** \-ti-k(ə-)lē\ *adv*

com·mu·ni·tar·i·an \kə-ˌmyü-nə-'ter-ē-ən\ *adj* (ca. 1909) : of or relating to social organization in small cooperative partially collectivist communities — **communitarian** *n* — **com·mu·ni·tar·i·an·ism** \-ē-ə-ˌniz-əm\ *n*

com·mu·ni·ty \kə-'myü-nət-ē\ *n, pl* **-ties** [ME *comunete*, fr. MF *comunneté*, fr. L *communitat-, communitas*, fr. *communis*] (14c) **1** : a unified body of individuals: as **a** : STATE, COMMONWEALTH **b** : the people with common interests living in a particular area; *broadly* : the area itself ⟨the problems of a large ~⟩ **c** : an interacting population of various kinds of individuals (as species) in a common location **d** : a group of people with a common characteristic or interest living together within a larger society ⟨a ~ of retired persons⟩ **e** : a group linked by a common policy **f** : a body of persons or nations having a common history or common social, economic, and political interests ⟨the international ~⟩ **g** : a body of persons of common and esp. professional interests scattered through a larger society ⟨the academic ~⟩ **2** : society at large **3 a** : joint ownership or participation ⟨~ of goods⟩ **b** : common character : LIKENESS ⟨~ of interests⟩ **c** : social activity : FELLOWSHIP **d** : a social state or condition

community antenna television *n* (1953) : CABLE TELEVISION

community center *n* (1915) : a building or group of buildings for a community's educational and recreational activities

community chest *n* (1919) : a general fund accumulated from individual subscriptions to defray demands on a community for charity and social welfare

community college *n* (1948) : a nonresidential 2-year college that is usu. government-supported

community property *n* (ca. 1925) : property held jointly by husband and wife

com·mu·nize \'käm-yə-ˌnīz\ *vt* **-nized; -niz·ing** [back-formation fr. *communization*] (1888) **1 a** : to make common **b** : to make into state-owned property **2** : to subject to Communist principles of organization — **com·mu·ni·za·tion** \ˌkäm-yə-nə-'zā-shən\ *n*

com·mu·tate \'käm-yə-ˌtāt\ *vt* **-tat·ed; -tat·ing** [back-formation fr. *commutation*] (1890) : to reverse every other half cycle of (an alternating current) so as to form a unidirectional current

com·mu·ta·tion \ˌkäm-yə-'tā-shən\ *n* [ME, fr. MF, fr. L *commutation-, commutatio*, fr. *commutatus*, pp. of *commutare*] (15c) **1** : EXCHANGE, TRADE **2** : REPLACEMENT; *specif* : a substitution of one form of payment or charge for another **3** : a change of a legal penalty or punishment to a lesser one **4** : an act or process of commuting **5** : the action of commutating

commutation ticket *n* (1848) : a transportation ticket sold for a fixed number of trips over the same route during a limited period

com·mu·ta·tive \'käm-yə-ˌtāt-iv, kə-'myüt-ət-\ *adj* (ca. 1755) **1** : of, relating to, or showing commutation **2** : of, relating to, or characterized by the combination of elements of a given set under a specified operation in such a manner that the result is independent of the order in which the elements are taken ⟨a ~ group⟩ ⟨addition of the positive integers is ~⟩

com·mu·ta·tiv·i·ty \kə-ˌmyüt-ə-'tiv-ət-ē, ˌkäm-yə-tə-\ *n* (1929) : the property of being commutative ⟨the ~ of a mathematical operation⟩

com·mu·ta·tor \'käm-yə-ˌtāt-ər\ *n* (1839) **1** : a switch for reversing the direction of an electric current **2** : a series of bars or segments so connected to armature coils of a dynamo that rotation of the armature in conjunction with fixed brushes results in unidirectional current output; in the case of a generator and in the reversal of the current into the coils in the case of a motor **3** : an element of a mathematical group that when multiplied by the product of two given elements yields the product of the elements in reverse order

com·mute \kə-'myüt\ *vb* **com·mut·ed; com·mut·ing** [L *commutare* to change, exchange, fr. *com-* + *mutare* to change — more at MISS] *vt* (15c) **1 a** : CHANGE, ALTER **b** : to give in exchange for another : EXCHANGE **2** : to convert (as a payment) into another form **3** : to exchange (a penalty) for another less severe **4** : COMMUTATE ~ *vi* **1** : to make up : COMPENSATE **2** : to pay in gross **3** : to travel back and forth regularly (as between a suburb and a city) **4** : to yield the same mathematical result regardless of order — used of two elements under an operation or of two operations on elements — **com·mut·able** \-'myüt-ə-bəl\ *adj*

commute *n* (1954) : a trip made in commuting

com·mu·ter \kə-'myüt-ər\ *n* (ca. 1864) **1** : a person who commutes (as between a suburb and a city) **2** : a small airline that carries passengers relatively short distances on a regular schedule

com·no·mer \(')kō-'mān-ə-mər, -'mō-nə-\ *n* [*co-* + *monomer*] (1945) : one of the constituents of a copolymer

com·pli·men \'käm-plə-mən\ *n* [short for *complimentary*] (1887) : a complimentary ticket; *broadly* : something provided free of charge

com·pli·ment \'käm-plə-mənt, -ˌment\ *vi* [short for *accompany*] (1949) : to punctuate and support a jazz solo with irregularly spaced chords

com·pact \kəm-'pakt, käm-, 'käm-\ *adj* [ME, firmly put together, fr. L *compactus*, fr. pp. of *compingere* to put together, fr. *com-* + *pangere* to fasten — more at PACT] (14c) **1** : predominantly formed or filled ⟨COMPOSED, MADE **2 a** : having parts or units closely packed or united ⟨a ~ woolen⟩ **b** : not diffuse or verbose ⟨a ~ statement⟩ **c** : occupying a small volume by reason of efficient use of space ⟨a ~ camera⟩ ⟨a ~ formation of troops⟩ **d** : short-bodied, solid, and without excess flesh **3** : being a metric space with the property that for any collection of open sets which contains it there is a subset of the collection with a finite number of elements which also contains it — **com·pact·ly** *adv* — **com·pact·ness** *n*

²compact *vt* (15c) **1** : to make up by connecting or combining : COMPOSE **2 a** : to knit or draw together : COMBINE **b** : to press together : COMPRESS ~ *vi* : to become compacted — **com·pact·ible** \-'pak-tə-bəl, -ˌpak-\ *adj* — **com·pac·tor** *also* **com·pact·er** \-'pak-tər, -ˌpak-\ *n*

³com·pact \'käm-ˌpakt\ *n* (1601) : something that is compact or compacted: **a** : a small cosmetic case (as for compressed powder) **b** : an automobile smaller than an intermediate but larger than a subcompact

⁴com·pact \'käm-ˌpakt\ *n* [L *compactum*, fr. neut. of *compactus*, pp. of *compacisci* to make an agreement, fr. *com-* + *pacisci* to contract — more at PACT] (1591) : an agreement or covenant between two or more parties

compact disc *n* (1980) : a small plastic optical disc usu. containing recorded music

com·pac·tion \kəm-'pak-shən, käm-\ *n* (14c) : the act or process of compacting : the state of being compacted

¹com·pan·ion \kəm-'pan-yən\ *n* [ME *compainoun*, fr. OF *compagnon*, fr. LL *companion-, companio*, fr. L *com-* + *panis* bread, food — more at FOOD] (13c) **1** : one that accompanies another : COMRADE, ASSOCIATE **2** *obs* : RASCAL **3 a** : one that is closely connected with something similar **b** : one employed to live with and serve another

²companion *vt* (1622) : ACCOMPANY ~ *vi* : to keep company

³companion *n* [by folk etymology fr. D *kampanje* poop deck] (1762) **1** : a hood covering at the top of a companionway **2** : COMPANIONWAY

com·pan·ion·able \kəm-'pan-yə-nə-bəl\ *adj* (14c) : marked by, conducive to, or suggestive of companionship : SOCIABLE — **com·pan·ion·able·ness** *n* — **com·pan·ion·ably** \-blē\ *adv*

com·pan·ion·ate \kəm-'pan-yə-nət\ *adj* (1926) : relating to or having the manner of companions; *specif* : harmoniously or suitably accompanying

companionate marriage *n* (1927) : a proposed form of marriage in which legalized birth control would be practiced, the divorce of childless couples by mutual consent permitted, and neither party would have any financial or economic claim on the other

companion cell *n* (1887) : a living nucleated cell that is closely associated in origin, position, and probably function with a cell making up part of a sieve tube of a vascular plant

companion piece *n* (1844) : a work (as of literature) that is associated with and complements another

com·pan·ion·ship \kəm-'pan-yən-ˌship\ *n* (1548) : the fellowship existing among companions

com·pan·ion·way \-yən-ˌwā\ *n* [³*companion*] (1840) : a ship's stairway from one deck to another

¹com·pa·ny \'kəmp-(ə-)nē\ *n, pl* **-nies** *often attrib* [ME *companie*, fr. OF *compagnie*, fr. *compain* companion, fr. LL *companio*] (13c) **1 a** : association with another : FELLOWSHIP ⟨enjoy a person's ~⟩ **b** : COMPANIONS, ASSOCIATES ⟨know a person by the ~ he keeps⟩ **c** : VISITORS, GUESTS ⟨having ~ for dinner⟩ **2 a** : a group of persons or things ⟨a ~ of horsemen⟩ **b** : a body of soldiers; *specif* : a unit (as of infantry) consisting usu. of a headquarters and two or more platoons **c** : an organization of performing artists **d** : the officers and men of a ship **e** : a fire-fighting unit **3 a** : a chartered commercial organization or medieval trade guild **b** : an association of persons for carrying on a commercial or industrial enterprise **c** : those members of a partnership firm whose names do not appear in the firm name ⟨John Doe and *Company*⟩

²company *vt* **-nied; -ny·ing** (14c) : ACCOMPANY ⟨may ... fair winds ~ your safe return —John Masefield⟩ ~ *vi* : ASSOCIATE

company officer *n* (1844) : a commissioned officer in the army, air force, or marine corps of the rank of captain, first lieutenant, or second lieutenant — called also *company grade officer*; compare FIELD OFFICER, GENERAL OFFICER

company town *n* (1927) : a community that is dependent on one firm for all or most of the necessary services or functions of town life (as employment, housing, and stores)

company union *n* (1917) : an unaffiliated labor union of the employees of a single firm; *esp* : one dominated by the employer

com·pa·ra·bil·i·ty \ˌkäm-p(ə-)rə-'bil-ət-ē, ˌkəm-ˌpar-ə-\ *n* (1843) : the quality or state of being comparable

com·pa·ra·ble \'käm-p(ə-)rə-bəl, ˌkəm-'par-ə-bəl\ *adj* (15c) **1** : capable of or suitable for comparison **2** : EQUIVALENT, SIMILAR ⟨fabrics of ~ quality⟩ — **com·pa·ra·ble·ness** *n* — **com·pa·ra·bly** \-blē\ *adv*

com·par·a·tist \kəm-'par-ət-əst\ *n* [*comparative* + *-ist*] (1933) : one that uses a comparative method (as in the study of literature)

¹com·par·a·tive \kəm-'par-ət-iv\ *adj* (15c) **1** : of, relating to, or constituting the degree of comparison in a language that denotes increase in the quality, quantity, or relation expressed by an adjective or adverb **2** : considered as if in comparison to something else as a standard not quite attained : RELATIVE ⟨a ~ stranger⟩ **3** : characterized by systematic comparison esp. of likenesses and dissimilarities ⟨~ anatomy⟩ — **com·par·a·tive·ly** *adv* — **com·par·a·tive·ness** *n*

²comparative *n* (15c) **1 a** : one that compares with another esp. on equal footing : RIVAL **b** : one that makes witty or mocking comparisons **2** : the comparative degree or form in a language

com·par·a·tiv·ist \kəm-'par-ət-i-vəst\ *n* (1887) : COMPARATIST

com·par·a·tor \kəm-'par-ət-ər\ *n* (1883) : a device for comparing something with a similar thing or with a standard measure

¹com·pare \kəm-'pa(ə)r, -'pe(ə)r\ *vb* **com·pared; com·par·ing** [ME *comparen*, fr. MF *comparer*, fr. L *comparare* to couple, compare, fr. *compar* like, fr. *com-* + *par* equal] *vt* (14c) **1** : to represent as similar : LIKEN **2** : to examine the character or qualities of, esp. in order to discover resemblances or differences **3** : to inflect or modify (an adjective or

Deflection of Commutator

plas·tron \'plas-trən\ *n* [MF, fr. OIt *piastrone*, aug. of *piastra* thin metal plate — more at PIASTER] (ca. 1506) **1 a :** a metal breastplate formerly worn under the hauberk **b :** a quilted pad worn in fencing practice to protect the chest, waist, and the side on which the weapon is held **2 :** the ventral part of the shell of a tortoise or turtle consisting typically of nine symmetrically placed bones overlaid by horny plates **3 a :** a trimming like a bib for a woman's dress **b :** DICKEY 1a **4 :** a thin film of air held by water-repellent hairs of some aquatic insects

-plas·ty \,plas-tē\ *n comb form* [F *-plastie*, fr. LGk *-plastia* molding, fr. Gk *plastēs* molder, fr. *plassein*] : plastic surgery ⟨*osteoplasty*⟩
plasy — see -PLASIA

¹plat \'plat\ *vt* **plat·ted; plat·ting** [ME *platen*, alter. of *plaiten*] (14c) : PLAIT

²plat *n* (1535) : PLAIT

³plat *n* [prob. alter. of *plot*] (1517) **1 :** a small piece of ground (as a lot or quadrat) : PLOT **2 :** a plan, map, or chart of a piece of land with actual or proposed features (as lots); *also* : the land represented

⁴plat *vt* **plat·ted; plat·ting** (1751) : to make a plat of

plat·an \'plat-ᵊn\ *n* [ME, fr. L *platanus*] (14c) : ²PLANE

plat du jour \,plädə-ᵊzhü(ə)r, ,plad-\ *n, pl* **plats du jour** *same*\ [F, lit., plate of the day] (1906) : a dish that is featured by a restaurant on a particular day

¹plate \'plāt\ *n* [ME, fr. OF, fr. *plate*, fem. of *plat* flat, fr. (assumed) VL *plattus*, prob. fr. Gk *platys* broad, flat — more at PLACE] (13c) **1 a :** a smooth flat thin piece of material **b** (1) : forged, rolled, or cast metal sheets usu. thicker than ¼ inch (2) : a very thin layer of metal deposited on a surface of base metal by plating **c :** one of the broad metal pieces used in armor; *also* : armor of such plates **d :** (1) : a lamina or plaque (as of bone or horn) that forms part of an animal body; *esp* : SCUTE (2) : the thin under portion of the forequarter of beef; *esp* : the fatty back part — see BEEF illustration **e :** HOME PLATE **f :** any of the huge movable segments into which the earth's crust is divided and which are held to float on and travel over the mantle **2** [ME; partly fr. OF *plate* plate, piece of silver; partly fr. OSp *plata* silver, fr. (assumed) VL *plattus* flat] **a** *obs* : a silver coin **b :** precious metal; *esp* : silver bullion **3** [ME, fr. MF *plat* dish, plate, fr. *plat* flat] **a :** domestic hollowware made of or plated with gold, silver, or base metals **b :** a shallow usu. circular vessel from which food is eaten or served **c** (1) : PLATEFUL (2) : a main course served on a plate (3) : food and service supplied to one person ⟨a dinner at $10 a ~⟩ **d** (1) : a prize given to the winner in a contest (2) : a horse race in which the contestants compete for a prize rather than stakes **e :** a dish or pouch passed in taking collections **f :** a flat glass dish used chiefly for culturing microorganisms **4 a :** a prepared surface from which printing is done **b :** a sheet of material (as glass) coated with a light-sensitive photographic emulsion **c** (1) : the usu. flat or grid-formed anode of an electron tube at which electrons collect (2) : a metallic grid with its interstices filled with active material that forms one of the structural units of a battery **d :** LICENSE PLATE **5 :** a horizontal structural member that provides bearing and anchorage esp. for the trusses of a roof or the rafters **6 :** the part of a denture that fits to the mouth; *broadly* : DENTURE **7 :** a full-page illustration often on different paper from the text pages — **plate·ful** \-,fůl\ *n* — **plate·like** \-,lik\ *adj*

²plate *vt* **plat·ed; plat·ing** (14c) **1 :** to cover or equip with plate: as **a :** to arm with armor plate **b :** to cover with an adherent layer mechanically, chemically, or electrically; *also* : to deposit (as a layer) on a surface **2 :** to make a printing surface from or for **3 :** to fix or secure with a plate

pla·teau \pla-'tō, 'pla-,\ *n, pl* **plateaus** *or* **pla·teaux** \-'tōz, -,tōz\ [F, fr. MF, platter, fr. *plat* flat] (1796) **1 a :** a usu. extensive land area having a relatively level surface raised sharply above adjacent land on at least one side : TABLELAND **b :** a similar undersea feature **2 a :** a region of little or no change in a graphic representation **b :** a relatively stable level, period, or condition

plateau *vi* (1939) : to reach a level, period, or condition of stability

plate glass *n* (ca. 1727) : rolled, ground, and polished sheet glass

platelet \'plāt-lət\ *n* (1895) : a minute flattened body (as of ice or a mineral); *esp* : BLOOD PLATELET

plate·mak·er \'plāt-,mā-kər\ *n* (1904) : a machine for making printing plates and esp. offset printing plates — **plate·mak·ing** \-kiŋ\ *n*

platen \'plat-ᵊn\ *n* [MF *plateine*, fr. *plat*] (1541) **1 :** a flat plate; *esp* : one that exerts or receives pressure **2 :** the roller of a typewriter

plater \'plāt-ər\ *n* (1777) **1 :** one that plates **2 a :** a horse that runs chiefly in plate races **b :** an inferior racehorse

plate rail *n* (1902) : a rail or narrow shelf along the upper part of a wall for holding plates or ornaments

plate·resque \,plat-ə-'resk\ *adj, often cap* [Sp *plateresco*, fr. *platero* silversmith, fr. *plata* silver] (ca. 1842) : of, relating to, or being a 16th century Spanish architectural style characterized by elaborate ornamentation suggestive of silver plate

plate tectonics *n pl but sing in constr* (1969) : a theory that the lithosphere of the earth is divided into a small number of plates which float on and travel independently over the mantle and that much of the earth's seismic activity occurs at the boundaries of these plates

plat·form \'plat-,fȯrm\ *n, often attrib* [MF *plate forme* diagram, map, plan, flat form] (1574) **1 :** PLAN, DESIGN **2 :** a declaration of the principles and policies adopted by a political party or a candidate **3 a** (1) : a horizontal flat surface usu. higher than the adjoining area; *also* : a structure incorporating or providing a platform (2) : a raised flooring for speakers or performers) **b :** a place or opportunity for public expression **4 a :** a usu. thick layer (as of cork) between the inner sole and outer sole of a shoe **b :** a shoe having such a sole

platform rocker *n* (1944) : a chair that rocks on a stable platform

platform scale *n* (1834) : a weighing machine with a flat platform on which objects are weighed — called also *platform balance*

platform tennis *n* (1955) : a variation of paddle tennis that is played on a platform enclosed by a wire fence

plati- or **platino-** *comb form* [NL *platinum*] : platinum ⟨*platinotype*⟩

pla·ti·na \pla-'tē-nə\ *n* [Sp] (1750) : PLATINUM; *esp* : crude native platinum

plating *adj* (1940) : of the color platinum

plat·ing \'plāt-iŋ\ *n* (1831) **1 :** the act or process of plating **2 a :** a covering of metal plates **b :** a thin coating of metal

pla·tin·ic \pla-'tin-ik\ *adj* (1842) : of, relating to, or containing platinum esp. with a valence of four — compare PLATINOUS

plat·i·nize \'plat-ᵊn-,īz\ *vt* **-nized; -niz·ing** (1825) : to cover, treat, or combine with platinum or a compound of platinum

plat·i·no·cy·a·nide \,plat-ᵊn-ō-'sī-ə-,nīd\ *n* (1845) : a fluorescent complex salt formed by the union of platinous cyanide with another cyanide

plat·i·nous \'plat-nəs, -ᵊn-əs\ *adj* (1842) : of, relating to, or containing platinum esp. with a valence of two — compare PLATINIC

plat·i·num \'plat-nəm, -ᵊn-əm\ *n, often attrib* [NL, fr, Sp *platina*, fr. dim. of *plata* silver, fr. (assumed) VL *plattus* plate — more at PLATE] (1812) **1 :** a heavy precious grayish white noncorroding ductile malleable metallic element that fuses with difficulty and is used esp. in chemical ware and apparatus, as a catalyst, and in dental and jewelry alloys — see ELEMENT table **2 :** a moderate gray

platinum black *n* (ca. 1847) : a soft dull black powder of metallic platinum obtained by reduction and precipitation from solutions of its salts and used as a catalyst

platinum blonde *n* (1931) **1 :** a person whose hair is of a pale silvery blonde color that is usu. produced by bleach and a bluish rinse **2 :** the color of the hair of a platinum blonde

plat·i·tude \'plat-ə-,t(y)üd\ *n* [F, fr. *plat* flat, dull] (1812) **1 :** the quality or state of being dull or insipid **2 :** a banal, trite, or stale remark

plat·i·tu·di·nal \,plat-ə-'t(y)üd-nəl, -ᵊn-əl\ *adj* (1870) : PLATITUDINOUS

plat·i·tu·di·nar·i·an \-,t(y)üd-ᵊn-'er-ē-ən\ *n* (1855) : one given to the use of platitudes

plat·i·tu·di·nize \-'t(y)üd-ᵊn-,īz\ *vi* **-nized; -niz·ing** [*platitudinous*] (1885) : to utter platitudes

plat·i·tu·di·nous \-'t(y)üd-nəs, -ᵊn-əs\ *adj* [*platitude* + *-inous* (as in *multitudinous*)] (1862) : having the characteristics of a platitude : full of platitudes ⟨~ remarks⟩ — **plat·i·tu·di·nous·ly** *adv*

pla·ton·ic \plə-'tän-ik, plā-\ *adj* [L *platonicus*, fr. Gk *platōnikos*, fr. *Platōn* Plato] (1533) **1** *cap* : of, relating to, or characteristic of Plato or Platonism **2 a :** relating to or based on platonic love; *also* : experiencing or professing platonic love **b :** NOMINAL, THEORETICAL — **pla·ton·i·cal·ly** \-i-k(ə-)lē\ *adv*

platonic love *n, often cap P* (1631) **1 :** love conceived by Plato as ascending from passion for the individual to contemplation of the universal and ideal **2 :** a close relationship between two persons in which sexual desire has been suppressed or sublimated

Pla·to·nism \'plāt-ᵊn-,iz-əm\ *n* (ca. 1570) **1 a :** the philosophy of Plato stressing esp. that actual things are copies of transcendent ideas and that these ideas are the objects of true knowledge apprehended by reminiscence **b :** NEOPLATONISM **2 :** PLATONIC LOVE — **Pla·to·nist** \-ᵊn-əst\ *n* — **Pla·to·nis·tic** \,plāt-ᵊn-'is-tik\ *adj*

Pla·to·nize \'plāt-ᵊn-,iz\ *vb* **-nized; -niz·ing** *vi* (1608) : to adopt, imitate, or conform to Platonic opinions ~ *vt* : to explain in accordance with or adapt to Platonic doctrines; *esp* : IDEALIZE

¹pla·toon \plə-'tün, pla-\ *n* [F *peloton* small detachment, lit., ball, fr. MF *pelote* little ball — more at PELLET] (1637) **1 :** a subdivision of a company-size military unit normally consisting of two or more squads or sections **2 :** a group of persons sharing a common characteristic or activity ⟨a ~ of waiters⟩; *esp* : a group of football players who are trained for either offense or defense and are sent into or withdrawn from the game as a body

²platoon *vt* (1963) : to play (one player) alternately with another player in the same position (as on a baseball team) ~ *vi* **1 :** to alternate with another player at the same position **2 :** to use alternate players at the same position

platoon sergeant *n* (1915) : a noncommissioned officer in the army ranking above a staff sergeant and below a first sergeant

Platt-deutsch \'plat-,dȯich, 'plät-\ *n* [G, fr. D *Platduitsch*, lit., Low German, fr. *plat* flat, low + *duitsch* German] (1834) : a colloquial language of northern Germany comprising several Low German dialects

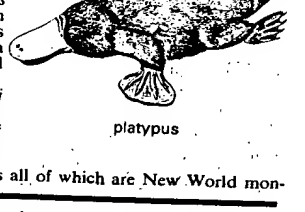
plat·ter \'plat-ər\ *n* [ME *plater*, fr. AF, fr. MF *plat* plate] (14c) **1 a :** a large plate used esp. for serving meat **b :** PLATE 3c(2) **2 :** a phonograph record — **plat·ter·ful** \-,fůl\ *n* — **on a platter :** without effort : very easily ⟨can have the presidency *on a platter* —Jonathan Daniels⟩

¹platy \'plāt-ē\ *adj* (1533) : resembling a plate; *also* : consisting of plates or flaky layers — used chiefly of soil or mineral formations

²platy \'plat-ē\ *n, pl* **platy** *or* **plat·ys** *or* **plat·ies** [NL *Platypoecilus*, former genus name of the fish] (1931) : either of two live-bearers (*Xiphophorus maculatus* and *X. variatus* of the family Poeciliidae) that are popular for tropical aquariums and are noted for variability and brilliant color — called also *platy·fish* \-,fish\

platy·hel·minth \,plat-i-'hel-,min(t)th\ *n* [deriv. of Gk *platys* broad, flat + *helminth-, helmis* helminth] (ca. 1890) : any of a phylum (Platyhelminthes) of soft-bodied usu. much flattened worms (as the planarians, flukes, and tapeworms) — **platy·hel·min·thic** \-hel-'min(t)-thik, -'mint-ik\ *adj*

platy·pus \'plat-i-pəs, -,půs\ *n, pl* **platy·pus·es** *also* **platy·pi** \-,pī, -,pē\ [NL, fr. Gk *platypous* flat-footed, fr. *platys* broad, flat + *pous* foot — more at PLACE, FOOT] (1832) : a small aquatic oviparous mammal (*Ornithorhynchus anatinus*) of southern and eastern Australia and Tasmania that has a fleshy bill resembling that of a duck, dense fur, webbed feet, and a broad flattened tail


platypus

plat·yr·rhine \'plat-i-,rīn\ *adj* (1857) **1** [NL *Platyrrhina*, fr. Gk *platyrrhin-, platyrrhis* broad-nosed, fr. *platys* + *-rrhin* -rrhine] : of, relating to, or being any of a division (Platyrrhina) of monkeys all of which are New World mon-

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